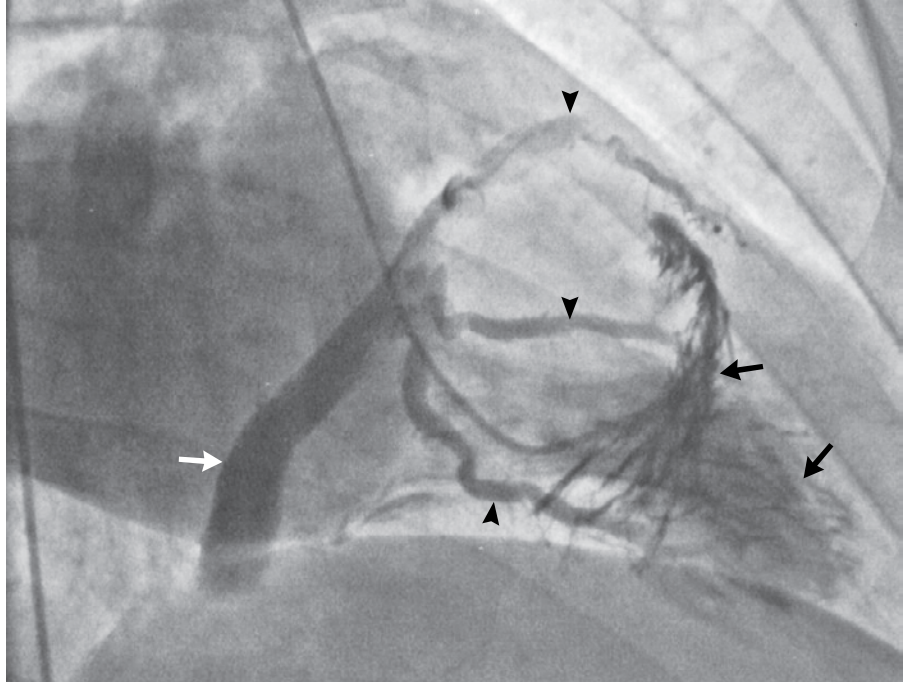


Imaging of Thebesian Venous System



Shalabh Singhal, M.D.
Saeb Khoury, M.D.

University of Cincinnati
College of Medicine
Cincinnati, OH 45267
singhash@ucmail.uc.edu

DURING LEFT VENTRICULOGRAPHY IN A 46-YEAR-OLD MAN WITH HYPERTROPHIC CARDIOMYOPATHY, we injected 20 ml of contrast material, using a power injector at a rate of 10 ml per second through a multipurpose catheter (MPA2). The left ventricle became opacified, and ventricular tachycardia subsequently developed, for which the patient underwent successful cardioversion. Initially, the catheter was free-floating. During the next beat, it was pulled in, resulting in cannulation. Contrast material was injected into what appeared to be thebesian veins (black arrows), with prompt visualization of cardiac veins (arrowheads) and the coronary sinus (white arrow). No persistent staining of the myocardium was noted. Echocardiography did not show subsequent pericardial effusion. The patient was observed overnight and discharged the next morning in stable condition. Initially described in 1706 by Vieussens and further elaborated by Thebesius in 1708, thebesian veins are small, valveless venous channels that provide direct connections between the coronary arteries or the coronary venous system and the chambers of the heart. They are thought to be more prevalent in the right atrium and the right ventricle. It has been proposed that thebesian veins provide an alternative channel of nutrition to the myocytes under certain conditions.

Copyright © 2008 Massachusetts Medical Society.